

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Amendment of Part 15 regarding new)	ET Docket No. 04-37
requirements and measurement guidelines for)	
Access Broadband over Power Line Systems)	
)	
Carrier Current Systems, including Broadband)	ET Docket No. 03-104
over Power Line Systems)	

To : The Commission

OPPOSITION TO PETITIONS FOR RECONSIDERATION

Ameren Energy Communications, Inc., Virginia Electric and Power Company, and Tucson Electric Power Company (the “Opponents”), by their counsel, and pursuant to Section 1.429 of the Commission’s Rules, 47 C.F.R. § 1.429, and the Commission’s Public Notice (Report No. 2694) published in 70 Fed. Reg. 44, hereby oppose certain aspects of petitions for reconsideration filed in this proceeding by Aeronautical Radio, Inc. (“ARINC”), the National Association for Amateur Radio (“ARRL”), the American Petroleum Institute (“API”), Current Technologies, LLC (“Current”) and the United Power Line Council (“UPLC”).¹

Specifically, the Opponents oppose the suggestion of ARINC and ARRL that the Commission change the existing extrapolation factor from 40 dB/decade to 20 dB/decade. The record in this proceeding demonstrates that the 40 dB/decade factor is appropriate for frequencies below 30 MHz.

¹ *Carrier Current Systems, including Broadband over Power Line Systems and Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems*, Report and Order (*Report & Order*), ET Docket Nos. 03-104 and 04-37, (rel. October 28, 2004).

The Opponents oppose API's suggestion to expand the BPL operator's advance notification requirements to Critical Infrastructure Industry ("CII") licensees. Advance notice of deployment adds no meaningful protection to CII licensees but imposes additional and unwarranted administrative burdens on the nascent BPL industry.

The Opponents oppose the suggestion of Current and the UPLC to extend by eighteen (18) months, *i.e.*, until January 7, 2008, the transition period for the marketing or installation of equipment compliant with the new BPL technical rules. To the extent that the next generation of Access BPL equipment will further protect against inadvertent RF emissions, the Opponents are convinced that it should be implemented sooner rather than later.

Finally, the Opponents agree with several Petitioners that the Commission should eliminate the requirement that a BPL operator provide thirty (30)-days' advance notice before providing initial service. The advance notice requirement gives broadband competitors an unfair advantage in the marketplace without a concomitant regulatory benefit.

I. The Commission Should Not Reduce the Extrapolation Factor

In their Petitions for Reconsideration, ARINC and ARRL ask the Commission to change Section 15.31(f)(2) of its Rules by lowering the extrapolation factor from 40 dB/decade to 20 dB/decade.² Specifically, ARINC alleges that Ameren's analysis, contained in comments filed in this proceeding, was flawed because the frequencies analyzed by Ameren were compared to a decay factor of 40 dB/decade.³ According to ARINC, Ameren's theoretical model does not agree with NTIA's actual measurements, indicating a significant mistake in Ameren's comparison of its theoretical results to the NTIA measured results.

² ARINC Petition at 6; ARRL Petition at p. 24.

³ ARINC Petition at pp. 7-8.

In its reply comments, Ameren pointed out that the NTIA report had limitations because its reported field characterization was in terms of received power by the measurement antenna (dBmW) and not the corresponding field strength values (dBuV/m).⁴ Nevertheless, Ameren observed that comparison of NTIA Figures D-27, D-29, D-31 (below 30 MHz) to Ameren's model (3MHz and 15 MHz) showed that the 40 dB/decade factor is appropriate for this frequency range.⁵

ARINC is not asking the Commission to change the extrapolation factor for frequencies above 30 MHz. Accordingly, Ameren's observation that the 40 dB/decade factor is appropriate with respect to frequencies below 30 MHz remains valid and supports continued adherence to this standard.

Section 9.3.2 of the NTIA Report warns that NTIA's analysis utilized an *ad hoc* measurement approach that did not demonstrate compliance with the field strength limits. Accordingly, as ARINC points out, NTIA noted that the Phase I analysis indicated that the extrapolation factors may be unrealistic. However, ARINC fails to mention that NTIA subsequently performed computer modeling using the Commission's proposed slant-path distance rather than horizontal distance. The results of the NTIA computer modeling showed that the change of field strength with distance was consistent with the existing Part 15 distance extrapolation.⁶

⁴ Ameren Reply Comments at p. 6.

⁵ *Id.* at p. 9.

⁶ Notice of the National Telecommunications and Information Administration in ET Docket No. 04-37 (September 24, 2004).

Moreover, ARINC erroneously states that the Commission rested its decision to retain the 40 dB/decade extrapolation factor for frequencies below 30 MHz upon Ameren's model.⁷ However, the Commission clearly stated that upon review of the entire record, *including* the ARRL, ARINC, and Ameren filings, it did not find "conclusive experimental data" to justify changing the extrapolation factor.⁸ Accordingly, the Commission properly decided to maintain the existing extrapolation factor, modifying the procedure to require the use of the slant range. Petitioners have not come forward with additional measurement data. To the contrary they have merely rehashed the record, with no persuasive effect.

Attached to ARINC's Petition is its "model" that purports to show that the extrapolation factor for frequencies less than 30 MHz should be reduced from 40 dB/decade to 20 dB/decade.⁹ The ARINC model analyzed theoretical BPL emissions to predict field strength and radiation patterns. However, Section 15.31(f)(2) the Commission's Rules specifies that measurements should not be taken in the near field.¹⁰ This Rule Section is well justified because, as it is well known and established through field tests, the EM fields near the line consist of transition regions with oscillating behavior and admit of no extrapolation factor. Therefore, while ARINC's model may predict a certain extrapolation factor, in actual field tests, such measurements would be unreliable.

In addition, the ARINC model's predicted extrapolation factor assumes that the actual field measurement is taken at the peak field strength along the radiator.¹¹ On this point,

⁷ ARINC Petition at p. 6.

⁸ *Report and Order* at para. 109.

⁹ ARINC Petition at Appendix A.

¹⁰ 47 C.F.R. § 15.31(f)(2) "At frequencies below 30 MHz . . . an attempt should be made to avoid making measurements in the near field."

¹¹ ARINC Appendix A-6.

ARINC admits that measurements taken at such locations are difficult to apply in the real world and that taking such measurements would be highly unlikely.¹² In addition, the ARINC model utilizes horizontal distance for its analysis, and therefore, did not utilize the Commission's new requirement to take measurements with respect to the slant range.

Simply put, ARINC's model does not convincingly demonstrate that the 40 dB/decade extrapolation factor is inappropriate and should be modified. The Commission should retain the existing 40 dB/decade extrapolation factor.

II. The Commission Should Not Expand the BPL Operator's Notification Requirements

In its Petition for Reconsideration, API asks the Commission to expand the pre-operation notification requirement for public safety radio systems to include CII licensees.¹³ Such expansion would unduly burden the nascent BPL industry by requiring BPL operators to provide thirty days' advance notice to potentially thousands of CII licensees when a BPL system begins initial operations, activates any major system extensions, or makes any changes in its operating characteristics.¹⁴ This expansion would include the obligation to respond to complaints from CII licensees within twenty-four hours.¹⁵

Opponents, themselves electric utilities and operators of critical infrastructure radio systems, fully understand and support the concept of protecting critical infrastructure radio communications. However, in this docket the Commission put in place technical measures that far exceed the normal requirements for Part 15 devices, specifically designed to prevent the operational problems that concern API. When the next generation of equipment comes

¹² *Id.*

¹³ API Petition at p. 3.

¹⁴ *Id.* at pp. 3, 5-7.

on line – an event that Opponents argue below should take place on schedule – these technical measures will be even more effective. Advance notice, in and of itself, does nothing to increase the protection to existing systems, whether CII, public safety or otherwise. Giving advance notice to police and fire departments is really a belt-and-suspenders approach which can be justified when the immediate safety of life is on the line, but which in other circumstances cannot outweigh the burden to implement.

This would not be the first time that the Commission has concluded that it was not necessary to treat CII systems exactly the same as public safety. In its *Supplemental Order* in the 800 MHz proceeding¹⁶ for example, the Commission afforded additional protections to public safety radio services but specifically excluded CII licensees from such protections.¹⁷

As API acknowledges, expansion of the protections afforded public safety radio systems to CII licensees would be, to say the least, “somewhat difficult or burdensome” for BPL operators.¹⁸ API nonetheless suggests that the burden can be reduced if the Commission only requires such notifications in instances where a CII licensee has provided its contact information to the BPL database administrator.¹⁹

¹⁵ *Id.* at pp. 6-7.

¹⁶ *Improving Public Safety Communications in the 800 MHz Band*, Report and Order, Fifth Report and Order, Forth Memorandum Opinion and Order, and Order, WT Docket No. 02-55; FCC 04-168 (2004) (“*800 MHz Order*”).

¹⁷ 70 Fed. Reg. 6757 (Feb. 8, 2005), *Improving Public Safety Communications in the 800 MHz Band*, Supplemental Order and Order on Reconsideration, WT Docket No. 02-55, FCC 04-294 (2004) (“*Supplemental Order*”). A Petition for Reconsideration was filed by the American Petroleum Institute and the United Telecom Council in ET Docket No. 02-55 (filed March 10, 2005). API goes so far as to ask the Commission to provide all 800 MHz PLMRS licenses with the same interim interference protection as public safety licensees.

¹⁸ API Petition at p. 5.

¹⁹ *Id.* at p. 6.

API's suggestion does not ease the burden. The BPL provider would still be required to search the BPL database to identify which CII licensees located in its BPL service territory had requested to be notified. Depending on the size and location of the BPL service territory, each BPL provider may be required to identify dozens, if not hundreds of CII licensees. The BPL provider will then be required to provide notification to those licensees that had provided contact information. Virtually no burden has been eliminated.

The fact that all CII licenses would not receive notice unless they had contacted the database administrator belies API's argument. Simply put, if it is permissible for *some* CII licensees not to receive notice, then there is no inherent reason why *any* CII licensees must receive notice.

III. The Commission Should Not Extend the Transition Period for the Marketing or Installation of New BPL Equipment

In their Petitions for Reconsideration, Current and UPLC ask the Commission to extend by eighteen (18) months, until January 7, 2008, the transition period for the marketing or installation of equipment compliant with the new BPL technical rules. Although admitting that it will meet the July 7, 2006, certification deadline as to manufacturing and importation of technologically advanced BPL devices,²⁰ Current nonetheless foresees a problem with installing and marketing only newly certified equipment after the deadline to the extent the term "marketing" includes shipment.²¹ Indeed, Current seeks additional time to liquidate its

²⁰ Current Petition at p. 7.

²¹ Current Petition at p. 8.

older BPL equipment.²² Likewise, UPLC requests the additional eighteen-month extension to sell inventories of earlier-generation BPL equipment.²³

This is a new industry with a comparatively small installed base of first-generation BPL equipment. With all of the concern for inadvertent RF emissions, the industry should not have to wait for BPL manufacturers to clear their inventories of old equipment before they can receive and deploy the newly engineered BPL equipment.

Current also contends that it needs more time to manufacture in commercial quantities and distribute the next-generation BPL devices.²⁴ Current nonetheless concedes that it will meet the July 7, 2006, certification deadline. In addition, there is still a relatively low volume of BPL equipment being utilized. Accordingly, Current's argument that additional time is needed to market older BPL devices does not hold water. Current's reliance on prior instances in which the Commission did not set timetables for marketing, cuts against its own assertions. As pointed out by Current, where a particular device, such as personal computers, is mass produced, the Commission has extended the time for required marketing.²⁵ Because BPL equipment is currently produced in limited quantities due to the nature of this nascent industry, there is no equivalent reason for the Commission to delay introduction of the new generation of BPL devices to BPL operators and their utility partners.

BPL operators and electric utilities should not have to wait nearly three more years, to January 7, 2008, to receive new BPL equipment that will further reduce the likelihood of producing harmful interference. As correctly noted by Current, the Commission's new

²² UPLC Petition at p. 7.

²³ *Id.*

²⁴ *Id.* at p. 8.

²⁵ *Id.* at p. 9.

technical rules require the new BPL equipment to differ in important respects from today's generation of BPL equipment, including remote adjustment of power and operating frequencies; specific notch filtering; start-up-requirements, and remote-control shutdown.²⁶ Far from being a "burden without benefit,"²⁷ the July 7, 2006 deadline for installing and marketing only newly certified equipment helps ensure that harmful interference is minimized by getting the best technology quickly into the hands of the BPL operators and electric utilities. Receipt of such equipment reduces market risk associated with operation BPL systems, which, in turn, allows for increased capital inflow for BPL equipment acquisitions.

The Opponents urge the Commission not to extend by eighteen months the transition period for the marketing or installation of equipment compliant with the new BPL technical rules as requested by Current and the UPLC. The extension will only delay adoption of BPL technology and the potential benefits it offers to consumers and the grid control requirements of the electric industry.

IV. The Commission Should Eliminate the Thirty-day Notice Requirement

The Opponents agree with the suggestion of Amperion,²⁸ Current,²⁹ and the UPLC,³⁰ that the Commission should eliminate the thirty-day notice requirement before service begins. The requirement harms BPL providers as it provides BPL market intelligence to broadband competitors implementing different technologies, enabling broadband competitors

²⁶ Current Petition at p. 7.

²⁷ Current Petition at p. 10.

²⁸ Amperion Petition at pp. 2-4.

²⁹ Current Petition at pp. 3-5.

³⁰ UPLC Petition at pp. 3-6.

to fend off competition from BPL providers in the noticed service areas. No other competing broadband provider, including cable modem service, DSL service, and wireless service, is required to provide the location of its infrastructure and equipment to its competitors prior to initiation of service.

V. Conclusion

The Commission should deny the request of ARINC and the ARRL to lower the existing extrapolation factor from 40 dB/decade to 20 dB/decade. As shown by the Opponents, the record in this proceeding shows that the 40 dB/decade factor is appropriate for frequencies below 30 MHz. The Commission also should decline API's suggestion to expand the BPL operator's notification requirements to CII licensees. Advance notice adds no technological protection, but carries with it administrative burdens that are inappropriate for the nascent BPL industry. The Opponents also have demonstrated that BPL operators and electric utilities should not be forced to wait nearly three more years to receive the next generation BPL equipment. Accordingly, the request for extension of time by Current and the UPLC should be denied. Finally, the Opponents urge the Commission to eliminate the thirty-day advance notice requirement. The requirement only serves to undermine competitive BPL entry into the broadband market.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Magdalene Copp, a secretary of the law office of Troutman Sanders LLP, do hereby certify that I have this 23rd day of March, 2005, served by first-class mail, postage pre-paid, and by fax (*) a copy of the foregoing Opposition to Petitions for Reconsideration attached document on the following parties:

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